

August 21, 2019

Arcelor Mittal USA, Inc.
250 W US Highway 12
Burns Harbor, IN 46304-9745

Work Order No.: 19H1223

Re: Spill Samples-CN

Dear Teri Kirk:

Microbac Laboratories, Inc. - Chicagoland Division received 6 sample(s) on 8/20/2019 10:50:00AM for the analyses presented in the following report as Work Order 19H1223.

The enclosed results were obtained from and are applicable to the sample(s) as received at the laboratory. All sample results are reported on an "as received" basis unless otherwise noted.

All data included in this report have been reviewed and meet the applicable project specific and certification specific requirements, unless otherwise noted. A qualifications page is included in this report and lists the programs under which Microbac maintains certification.

This report has been paginated in its entirety and shall not be reproduced except in full, without the written approval of Microbac Laboratories.

We appreciate the opportunity to service your analytical needs. If you have any questions, please contact your project manager. For any feedback, please contact Ron Misiunas, Division Manager, at ron.misiunas@microbac.com.

Sincerely,
Microbac Laboratories, Inc.



Carey Gadzala
Project Manager



WORK ORDER SAMPLE SUMMARY

Date: *Wednesday, August 21, 2019*

Client: Arcelor Mittal USA, Inc.
Project: Spill Samples-CN
Lab Order: 19H1223

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
19H1223-01	Lagoon Channel Inlet		08/19/2019 13:00	8/20/2019 10:50:00AM
19H1223-02	South Lagoon Inlet		08/19/2019 13:07	8/20/2019 10:50:00AM
19H1223-03	011		08/19/2019 15:15	8/20/2019 10:50:00AM
19H1223-04	Lagoon Channel Inlet		08/20/2019 07:50	8/20/2019 10:50:00AM
19H1223-05	South Lagoon Inlet		08/20/2019 07:55	8/20/2019 10:50:00AM
19H1223-06	011		08/20/2019 08:00	8/20/2019 10:50:00AM

Analytical Results

Date: *Wednesday, August 21, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1223-01
Client Project:	Spill Samples-CN	Sampled:	08/19/2019 13:00
Client Sample ID:	Lagoon Channel Inlet	Received:	08/20/2019 10:50
Sample Description:			
Matrix:	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: SM 4500-CN C/E-1999			Analyst: ABG		
			Prep Method: NA			Prep Date/Time: 08/20/2019 14:45		
Total Cyanide								
Cyanide, Total	dij	A	0.013	0.0050		mg/L	1	08/20/2019 17:10

Analytical Results

Date: *Wednesday, August 21, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1223-02
Client Project:	Spill Samples-CN	Sampled:	08/19/2019 13:07
Client Sample ID:	South Lagoon Inlet	Received:	08/20/2019 10:50
Sample Description:			
Matrix:	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: SM 4500-CN C/E-1999				Analyst: ABG	
Total Cyanide			Prep Method: NA				Prep Date/Time: 08/20/2019 14:45	
Cyanide, Total	dij	A	0.011	0.0050		mg/L	1	08/20/2019 17:11

Analytical Results

Date: *Wednesday, August 21, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1223-03
Client Project:	Spill Samples-CN	Sampled:	08/19/2019 15:15
Client Sample ID:	011	Received:	08/20/2019 10:50
Sample Description:			
Matrix:	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
		Method: SM 4500-CN C/E-1999			Analyst: ABG			
Total Cyanide		Prep Method: NA			Prep Date/Time: 08/20/2019 14:45			
Cyanide, Total	dij	A	ND	0.0050		mg/L	1	08/20/2019 17:13

Analytical Results

Date: *Wednesday, August 21, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1223-04
Client Project:	Spill Samples-CN	Sampled:	08/20/2019 7:50
Client Sample ID:	Lagoon Channel Inlet	Received:	08/20/2019 10:50
Sample Description:			
Matrix:	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: SM 4500-CN C/E-1999		Analyst: ABG			
Total Cyanide			Prep Method: NA		Prep Date/Time: 08/20/2019 14:45			
Cyanide, Total	dij	A	0.0096	0.0050		mg/L	1	08/20/2019 17:15

Analytical Results

Date: *Wednesday, August 21, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1223-05
Client Project:	Spill Samples-CN	Sampled:	08/20/2019 7:55
Client Sample ID:	South Lagoon Inlet	Received:	08/20/2019 10:50
Sample Description:			
Matrix:	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: SM 4500-CN C/E-1999		Analyst: ABG			
Total Cyanide			Prep Method: NA		Prep Date/Time: 08/20/2019 14:45			
Cyanide, Total	dij	A	0.0077	0.0050		mg/L	1	08/20/2019 17:16

Analytical Results

Date: *Wednesday, August 21, 2019*

Client:	Arcelor Mittal USA, Inc.	Work Order/ID:	19H1223-06
Client Project:	Spill Samples-CN	Sampled:	08/20/2019 8:00
Client Sample ID:	011	Received:	08/20/2019 10:50
Sample Description:			
Matrix:	Aqueous		

Analyses	Certs	AT	Result	RL	Qual	Units	DF	Analyzed
			Method: SM 4500-CN C/E-1999			Analyst: lachat4		
			Prep Method: NA			Prep Date/Time: 08/21/2019 10:45		
Total Cyanide								
Cyanide, Total	dij	A	0.11	0.0050		mg/L	1	08/21/2019 15:10

ANALYTE TYPES: (AT)

A, B = Target Analyte

I = Internal Standard

M = Summation Analyte

S = Surrogate

T = Tentatively Identified Compound (TIC, concentration estimated)



QC SAMPLE IDENTIFICATIONS

BLK = Method Blank

DUP = Method Duplicate

BS = Method Blank Spike

MS = Matrix Spike

ICB = Initial Calibration Blank

CCB = Continuing Calibration Blank

CRL = Client Required Reporting Limit

PDS = Post Digestion Spike

QCS = Quality Control Standard

ICSA = Interference Check Standard "A"

ICSAB = Interference Check Standard "AB"

BSD = Method Blank Spike Duplicate

MSD = Matrix Spike Duplicate

ICV = Initial Calibration Verification

CCV = Continuing Calibration Verification

OPR = Ongoing Precision and Recovery Standard

SD = Serial Dilution

CERTIFICATIONS (Certs)

Below is a list of certifications maintained by the Microbac Merrillville Laboratory. All data included in this report has been reviewed for and meets all project specific and quality control requirements of the applicable accreditation, unless otherwise noted. Complete lists of individual analytes pursuant to each certification below are available upon request.

d Illinois EPA drinking water, wastewater and solid waste analysis (#200064)

i Kansas Dept Health & Env. NELAP (#E-10397)

j Kentucky Wastewater Laboratory Certification Program (#108202)

FLAGS, FOOTNOTES AND ABBREVIATIONS (as needed)**RL:** Reporting Limit**RPD:** Relative Percent Difference

Cooler Receipt Log

Cooler ID: Default Cooler

Temp: 3.0°C
 MICROBAC®

Comments

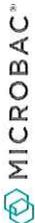
No times on sample containers

Cooler Inspection Checklist

Ice Present or not required?	Yes
Shipping containers sealed or not required?	Yes
Custody seals intact or not required?	Yes
Chain of Custody (COC) Present?	Yes
COC includes customer information?	Yes
Relinquished and received signature on COC?	Yes
Sample collector identified on COC?	Yes
Sample type identified on COC?	Yes
Correct type of Containers Received	Yes
Correct number of containers listed on COC?	Yes
Containers Intact?	Yes
COC includes requested analyses?	Yes
Enough sample volume for indicated tests received?	Yes
Sample labels match COC (Name, Date & Time?)	No
Samples arrived within hold time?	Yes
Correct preservatives on COC or not required?	Yes
Chemical preservations checked or not required?	Yes
Preservation checks meet method requirements?	Yes
VOA vials have zero headspace, or not recd.?	Yes

Microbac Laboratories, Inc.

250 West 84th Drive | Merrillville, IN 46410 | 800.536.8379 p | 219.769.8378 p | 219.769.1664 f | www.microbac.com



RUSH!

CHAIN OF CUSTODY RECORD

Number **152326**
Instructions on back

Lab Report Address

Invoice Address

Turnaround Time

TO BE COMPLETED BY MICROBAC

Client Name: *Arcelor (as witness) DA*

Client Name:

Routine (5 to 7 business days)
 RUSH* (notify lab)

Temperature Upon Receipt (°C) *30.13-30.2*
Therm ID

Address:

Address:

Holding Time

City, State, Zip:

City, State, Zip:

(needed by)

Samples Received on Ice? Yes No N/A

Contact: *Tami Kirk*

Contact:

Report Type

Custody Seals Intact? Yes No N/A

Telephone No.:

Telephone No.:

Level 1 Level 2 Level 3 Level 4 EDD

Send Report via: Mail Fax e-mail (address)

Send Invoice via: Mail Fax e-mail (address)

Compliance Monitoring? Yes No
 Agency/Program

Project:

Location:

PO No.:

Sampled by (PRINT): *Warren Howard*

Sampler Signature: *Warren Howard*

Sampler Phone No.:

* Matrix Types: Soil/Solid (S), Sludge, Oil, Wipe, Drinking Water (DW), Groundwater (GW), Surface Water (SW), Waste Water (WW), Other (specify)
** Preservative Types: (1) HNO3, (2) H2SO4, (3) HCl, (4) NaOH, (5) Zinc Acetate, (6) Methanol, (7) Sodium Bisulfate, (8) Sodium Thiosulfate, (9) Hexane, (U) Unpreserved

Client Sample ID	Date Collected	Time Collected	No. of Containers	Matrix	Grab / Comp	Preservative Types **	Requested Analysis	Additional Notes
<i>Kajonw Channel Inlet</i>	<i>8/19/19</i>	<i>1300</i>	<i>1</i>	<i>G</i>	<i>X</i>	<i>Granitic</i>		<i>19H1223</i>
<i>South Kajonw Inlet</i>	<i>8/19/19</i>	<i>1307</i>	<i>1</i>	<i>G</i>	<i>X</i>			<i>01</i>
<i>Oil</i>	<i>8/19/19</i>	<i>1515</i>	<i>1</i>	<i>G</i>	<i>X</i>			<i>02</i>
<i>Kajonw Channel Inlet</i>	<i>8/20/19</i>	<i>0750</i>	<i>1</i>	<i>G</i>	<i>X</i>			<i>03</i>
<i>South Kajonw Inlet</i>	<i>8/20/19</i>	<i>0717</i>	<i>1</i>	<i>G</i>	<i>X</i>			<i>04</i>
<i>Oil</i>	<i>8/20/19</i>	<i>0800</i>	<i>1</i>	<i>G</i>	<i>X</i>			<i>05</i>
								<i>06</i>

Possible Hazard Identification Hazardous Non-Hazardous Radioactive Sample Disposition Dispose as appropriate Return Archive

Comments

Relinquished By (signature) <i>Warren Howard</i>	Date/Time <i>8/20/19 0800</i>	Received By (signature) <i>[Signature]</i>	Date/Time <i>8/20/19 0800</i>
Relinquished By (signature) <i>[Signature]</i>	Date/Time <i>8/20/19 1050</i>	Received By (signature)	Date/Time
Relinquished By (signature)	Date/Time	Received By (signature) <i>Nick Rewald</i>	Date/Time <i>8/20/19/1050</i>

19H1223 Carey Gadzala
ArcelorMittal - Burns Harbor, IN
Spill Samples-CN
08/20/2019

